

Application Number 09/730,199
Amendment dated January 30, 2004
Responsive to advisory Office Action of January 12, 2004

REMARKS

Applicants submit this Amendment as part of a request for continued examination (RCE) filing. This Amendment constitutes the submission required under 37 C.F.R. § 1.114. Applicants have amended claims 1, 6, 7, 21 and 27-32. Claims 33-43 have been withdrawn by the Examiner as being directed to non-elected subject matter. Claims 1, 3-17 and 20-32 are currently pending.

Claims 1, 3-6, 8-17, 20-27 and 29-30 stand rejected under 35 U.S.C § 103(a) as being unpatentable over Lewis et al. (U.S. Patent 4,519,065) (hereafter Lewis) in view of Davis et al. (PCT/US00/03644) (hereafter Davis). Claim 7 stands rejected under 35 U.S.C § 103(a) as being unpatentable over Lewis in view of Davis and further in view of Anderson et al (U.S. Patent 4,304,806). Claims 30 and 31 stand rejected under 35 U.S.C § 103(a) as being unpatentable over Lewis in view of Davis and further in view of Smith et al. (U.S. Patent 5,739,972) (hereafter Smith).

As a preliminary note, Applicants thank Examiner Uhlar for conducting the Examiner Interview of January 27, 2004. In the Examiner Interview, Applicants' representative discussed a number of issues with the Examiner. In particular, Applicants' representative and the Examiner discussed the Davis and Lewis references, as well as various limitations in claims 1, 20, 25 and 29. Although no agreement was reached, the Examiner indicated that he would give further consideration to limitations that specifically recite the sub-layers of a thin film stack that substantially conforms to surface variations of a polymer layer, and also indicated that he would give further consideration to Applicants' previous arguments with respect to claim 29.

Applicants again traverse the pending rejections for the reasons outlined in the Applicants previous responses. In particular, Applicants again submit that the prior art lacks a motivation to substitute an embossable layer of Lewis with a magnetic layer of Davis, and Lewis specifically teaches against the modification proposed by the Examiner. Applicants in no way acquiesce to any of the Examiner's characterizations of Lewis, Davis, Anderson or Smith, and neither admit nor acquiesce in the grounds of rejections advanced by the Examiner.

Nevertheless, in the interest of expediting prosecution toward issuance, Applicants have amended the pending claims to even more clearly distinguish the references applied by the Examiner. In particular, Applicants have amended all pending independent claims to recite that the second layer includes a photopolymer, the second layer exhibiting surface variations, wherein

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the photopolymer is pre-written with the surface variations and cured. Applicants believe this amendment more clearly distinguishes Applicants' claimed invention from the applied references. For example, Lewis states: "The information storage disks of the invention are provided with a reflective or conductive layer before the introduction of information into the disks." See column 14, lines 27-30. Thus, by reciting pre-written surface variations in a cured photopolymer layer, Applicants' pending claims distinguish Lewis.

Moreover, by reciting a cured photopolymer layer, Applicants' claimed second layer and third layers would not be embossable, as required by Lewis. In particular, a cured photopolymer layer is not an embossable layer. Therefore, any proposed substitution of layers from Davis for metal layers of Lewis would also make no sense to a person with ordinary skill. Moreover, if the photopolymer layer is pre-written and cured, any subsequently deposited layer would also be non-embossable insofar as it is formed on a cured photopolymer. In this manner, by reciting that the surface variations are pre-written, Applicants' invention clearly distinguishes Lewis and the Lewis-Davis combination proposed by the Examiner.

The Lewis reference describes only two types of media, both of which include embossable layers for creation of features after media fabrication. The first type of media taught by Lewis is an optical video disk, in which the embossable metallized layer of the video disk must be reflective. The second type of media taught by Lewis is a capacitive readout video disk that requires an embossable metallized layer that is conductive.

As outlined in previous responses, Applicants' believe the substitution of magnetic layers for embossable metal layers described in Lewis would frustrate the goals of Lewis. The previous rejections were improper for this reason. Moreover, as mentioned above, the recitation of a cured photopolymer layer would further frustrate the goals of Lewis.

Accordingly, by amending the claims to further recite that the second layer includes a photopolymer, the second layer exhibiting surface variations, wherein the photopolymer is pre-written with the surface variations and cured, Applicants submit that the pending claims even further distinguish the applied references. As claimed, Applicants' inventions require a cured photopolymer layer which is pre-written with surface variations, and a magnetic layer formed over the surface variations and substantially conforming to the surface variations. In other words, the pending claims require the magnetic layer be formed over pre-written surface variations of a cured

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photopolymer. This feature is not disclosed or suggested in the applied references either alone or in combination.

Applicants have also amended independent claims 1, 31 and 32 to recite a third layer including a magnetic recording material and substantially conforming to the surface variations of the second layer, wherein the third layer including the magnetic recording material forms a continuous layer over the surface variations. Applicants submit that if the substitution of magnetic layers of Davis were made for the embossable metal layer of Lewis (as proposed by the Examiner), the embossing performed in accordance with the teaching of Lewis would cause the media to exhibit a non-continuous layer (such as illustrated in FIG. 5 of Lewis) rather than a continuous layer (such as illustrated in FIG. 6 of Lewis). For this additional reason, Applicants submit that the features of claims 1, 31 and 32 are not disclosed or suggested in the applied references.

Applicants have also amended independent claims 27-30 to recite that the third layer comprises a thin film stack including a plurality of sub-layers that include an underlayer, a magnetic recording material, and a hard coat. This limitation is also presented in dependent claim 20 with respect to independent claim 1. The terms underlay and underlayer are both supported in Applicants' specification and are essentially equivalent terms relating to a type of sub-layer used in a thin film stack to improve the subsequent deposition of one or more magnetic materials of the thin film stack.

In the previous response, Applicants argued that nothing in the applied references discloses or suggests a third layer comprising a thin film stack that substantially conforms to the surface variations of the second layer. The Examiner had stated that a metal layer, a magneto-optic layer and a protective layer pieced together from the teaching of Lewis and Davis are equivalent to Applicants' claimed stack. Applicants argued that a person with ordinary skill in the art, however, would recognize that a thin film stack comprising a plurality of sub-layers is nothing akin to the ad-hoc combination of layers of Lewis and Davis proposed by the Examiner. In particular, no fair interpretation of a thin film stack would purport to be equivalent to the ad-hoc combination of layers of Lewis and Davis proposed by the Examiner. A thin film stack is well known in the art to refer to a combination of sub-layers that collectively provide a magnetic recording surface for the medium.

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In the Examiner Interview of January 27, 2004, Applicants' representative discussed the thin film stack feature with the Examiner. The Examiner indicated that the thin film stack feature should recite the sub-layers that are included in the stack in order for the Examiner to give the feature proper consideration. Applicants respectfully note that a thin film stack including an underlay (i.e. an underlayer), a magnetic material and a hard coat, which substantially conforms to the surface variations has been presented in claim 20. Nevertheless, in view of the comments by the Examiner during the Interview of January 27, 2004, Applicants respectfully request reconsideration of claim 20, as well as amended claims 27-30.

As a final note, Applicants strongly disagree with the Examiner's broad over-reaching interpretation of the Lewis reference. The Examiner states again and again that Lewis is not solely limited to optical media, and uses this observation to dismiss many of Applicants' arguments. Moreover, the Examiner appears to be reading Lewis with the benefit of hindsight, as though Lewis is somehow related to magnetic media.

The Lewis reference is completely unrelated to magnetic media, however. In particular, the Lewis reference describes two types of video disk media. The first type of video disk media described by Lewis is optical media having a reflective surface. The second type of video disk media described by Lewis is a capacitive readout media that includes a conductive surface.

Applicants respectfully submit that a person with ordinary skill in the art would consider Lewis irrelevant to the creation of magnetic media. The substitution of magnetic layers for embossable metallic layers of Lewis (as proposed by the Examiner) is an improper use of hindsight by the Examiner to reconstruct Applicants' invention. Moreover, the inclusion of lubricating layers, such as recited in claims 25 and 27-30, would not have been contemplated by a person with ordinary skill in the art for either a reflective or capacitive readout medium described in Lewis.

Nevertheless, in the interest of expediting prosecution towards issuance, Applicants have amended the pending claims to even more clearly distinguish Lewis and the other applied references, as outlined above. Applicants reserve the right to pursue claims previously submitted in one or more continuation applications.

Applicants respectfully request reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number

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09-0069. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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30 January 2004

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